

Listing of Claims:

Claims 1-13 (Canceled).

14. (New) A radio wave reception device comprising:

a radio wave reception unit which is capable of receiving arbitrary radio wave signals having different frequencies, and which converts a received arbitrary radio wave signal into an electric signal and outputs the electric signal;

an oscillation unit which includes a frequency determining section which determines a frequency f_0 in accordance with an equation:

$$(|f_1 + f_i|/p_1) = \dots = (|f_n + f_i|/p_n) = f_0$$

where p_1, \dots, p_n are positive integers and n is an integer equal to or greater than 2, and wherein the equation defines a relationship between the respective frequencies f_1, \dots, f_n of the arbitrary radio wave signals receivable by the radio wave reception unit and an intermediate frequency f_i , and wherein the oscillation unit outputs a signal having the frequency f_0 ;

a multiplying unit which multiplies the signal having the frequency f_0 output from the oscillation unit;

a frequency conversion unit which synthesizes the electric signal output from the radio wave reception unit with the signal output from the multiplying unit, and outputs a signal having the

intermediate frequency f_i which has a fixed value that is the same for all of the arbitrary radio wave signals receivable by the radio wave reception unit; and

25 a detection unit which demodulates the signal having the intermediate frequency f_i output from the frequency conversion unit.

15. (New) The radio wave reception device according to claim 14, further comprising a selection unit which selects an integer from the positive integers p_1 to p_n ,

5 wherein the multiplying unit multiplies the signal having the frequency f_0 output from the oscillation unit by the integer selected by the selection unit.

16. (New) A radio wave reception device comprising:

a radio wave reception unit which is capable of receiving arbitrary radio waves having different frequencies, and which outputs a received arbitrary radio wave by converting the
5 received arbitrary radio wave into an electric signal;

an oscillation unit which outputs a signal having a frequency f_0 which is obtained from an equation:

$$(|f_1 + f_i|/p_1) = \dots = (|f_n + f_i|/p_n) = f_0$$

10 where p_1, \dots, p_n are positive integers and n is an integer equal to or greater than 2, and wherein the equation defines a

relationship between the respective frequencies f_1, \dots, f_n of the arbitrary radio waves receivable by the radio wave reception unit and an intermediate frequency f_i ;

15 a frequency conversion unit which synthesizes the electric signal output from the radio wave reception unit with a harmonic component of the signal having the frequency f_0 output from the oscillation unit, and outputs the signal having the intermediate frequency f_i ; and

20 a detection unit which demodulates the signal having the intermediate frequency f_i output from the frequency conversion unit.

17. (New) A radio wave clock comprising a radio wave reception device, wherein the radio wave reception device includes:

5 a radio wave reception unit which is capable of receiving arbitrary radio waves that contain time data and that have different frequencies, wherein the radio wave reception unit outputs a received arbitrary radio wave by converting the received arbitrary radio wave into an electric signal;

10 an oscillation unit which outputs a signal having a frequency f_0 which is obtained from an equation:

$$(|f_1 \pm f_i|/p_1) = \dots = (|f_n \pm f_i|/p_n) = f_0$$

where p_1, \dots, p_n are positive integers and n is an integer equal to or greater than 2, and wherein the equation defines a relationship between the respective frequencies f_1, \dots, f_n of the arbitrary radio waves receivable by the radio wave reception unit and an intermediate frequency f_i ;

a frequency conversion unit which synthesizes the electric signal output from the radio wave reception unit with a harmonic component of the signal having the frequency f_0 output from the oscillation unit, and outputs the signal having the intermediate frequency f_i ; and

a detection unit which demodulates the signal having the intermediate frequency f_i output from the frequency conversion unit.